

Work Order ID 82571

April-03-12 8:36:28 AM

~~Ship April 13~~

82571

Page 1

Item ID: D3319-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Wearplate

Stop

NS2

Start Date: 03/04/2012 Start Qty: 10.00

10

Cust Item ID:

Required Date: 11/04/2012 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/04/03

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr D3319	Revision Nbr <u>net</u>								
100	FLOW WATER JET	0.00							
100									
Waterjet	Memo	0.00							
FLOW CNC Waterjet	1-Cut as per Dwg D3319								
1010 - 050	Dwg Rev: <u>E</u>								
	Prog Rev: <u>E</u>								
	2-Deburr if necessary								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	0.00							
Quality Control									
120	QC8- Inspect parts - second check	0.00							
120									
QC	Memo	0.00							
Quality Control									

B12-4-8

B12-4-8

8/12/04/09

45

Pto →

W/O: 82571		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
12/4/09	# 120	took qty x1 For QC template	S	12/4/09	x1	W	S 12/4/09

Part No: D 3319-1 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 82571

April-03-12 8:36:28 AM

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Page 2

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N900040100

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Item Name: Wearplate

Stop ***NS2***

Start Date: 03/04/2012 Start Qty: 10.00

10

Cust Item ID:

Required Date: 11/04/2012 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:

Run Start ***NR1***

QC: Date: SPC (Y/N): Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	NC BRAKE	0.00							
140									
Brake NC	Memo	0.00							
Brake NC	1- Form using DT8326 & DT8261 as per Dwg D3319Rev: <u>C</u> <u>\$ 12/04/09</u>								
	2- Form flat on press using DT8776 block								
150	QC6- Inspect dimensions to drawing	0.00							
150									
QC	Memo	0.00							
Quality Control									
160	Weld per dwg A/R Hardcoat steel Batch: _____	0.00							
160									
Large Fab	Large Fab	0.00							
Large Fab	Memo	0.00							
	1- Layout weld location as per Dwg D3319 using jig D3319-1T3								
	2- Weld hard surface using DT8755 per QSI 004 and Dwg D3319 Rev: <u>C</u>								
	Qty Part Number Description Batch								
	A/R N/A 228/7560 Hardcoat Rod <u>m117964</u> → <u>228</u>								

(15) me / MAL 12-04-11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 82571

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Page 3

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NS1

Revision ID:

Item Name: Wearplate

Stop

NS2

Start Date: 03/04/2012 Start Qty: 10.00

10

Cust Item ID:

Required Date: 11/04/2012 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

170

QC10- Inspect visual per QSI004- ground welds

0.00

170

QC

Memo

0.00

Quality Control

Sunday/11

180

QC5- Inspect part completeness to step on W/O

0.00

180

QC

Memo

0.00

Quality Control

Sunday/11

15

190

Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3

0.00

190

Powdercoat

Memo

0.00

Powder Coating

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

10:30
32001
11:00

15x

m-l
12/04/14

M117338

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

Work Order ID 82571

82571

Page 4

April-03-12 8:36:28 AM

Item ID: D3319-1

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Wearplate

Stop ***NS2***

Start Date: 03/04/2012 Start Qty: 10.00

10

Cust Item ID:

Required Date: 11/04/2012 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

200

QC3- Inspect Part Finish

0.00

200

QC

Memo

0.00

Quality Control

(15)

12 04 14

210

Packaging

0.00

210

Packaging

Memo

0.00

Packaging

Identify on inside surface using a permanent fine point marker with the following:
TCCA-PDA, Dart Aerospace Ltd.
P/N: D3319-1, B/N: BXXXXX
For Product Eligibility see PDA05-18
and Stock
Location: 85 497

(15x)

SP
12-04-16

220

QC21- Final Inspection - Work Order Release

0.00

220

QC

Memo

0.00

Quality Control

(15x)

12/4/17

12-04-16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-03-12 8:36:32 AM

Page 1

Work Order ID: 82571

82571

Parent Item: D3319-1

D3319-1

Parent Item Name: Wearplate

Start Date: 03/04/2012

Required Date: 11/04/2012

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP: B05.10.14Added step 9, dwg rev B KJ/EC
IPP Rev:C Now on Waterjet 06-10-26 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M1010S18GA		Purchased	No			100	sf	91.2960	0.628	6.610526	10		
M1010S18GA									**	B12-4-8			
1010/1025 SHEET .048													

Location

Loc Qty

Loc Code

MAT019

91.296

116268

3

117806

88.296

117806

(12)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	82571
Description: Wearplate		Part Number:	D3319-1
Inspection Dwg: D3319	Rev: B	Page 1 of 1	

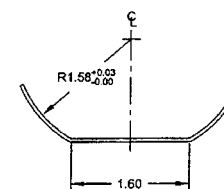
FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
4.98	+/-0.030	4.978	2		V B02	
1.600	+/-0.010	1.600	1		V	
2.660	+/-0.010	2.663	2		V	
3.190	+/-0.010	3.193	2		V	
3.563	+/-0.010	3.559	2		V	
4.71	+/-0.030	4.703	2		V	
0.60	+/-0.030	.601	2		V	
10.576	+/-0.010	10.576	5		T B01	
11.942	+/-0.010	11.942	2		T	
18.09	+/-0.030	18.09	2		T	
Ø0.316 x 0.546	+0.006/-0.001 x +/-0.010	319 x 547	1		V	
Ø0.316 x 0.670	+0.006/-0.001 x +/-0.010	319 x 671	1		V	
Ø0.190	+0.005/-0.001	.194	2		V	
3.815	± 0.010	3.815	2		V	
16.100	± 0.010	16.100	2		T	

Measured by: B	Audited by: S	Prototype Approval:	N/A
Date: 12-4-8	Date: 12/14/07	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	07.05.31	New Issue	KJ/JLM	

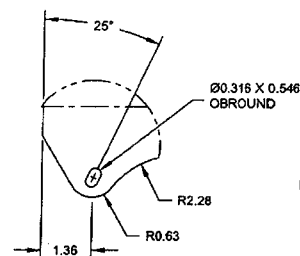


SECTION E-E B8-
SCALE 4X

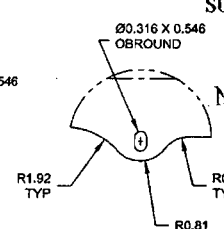
WITHOUT NOTICE
WORK ORDER

NO. 82571 R4

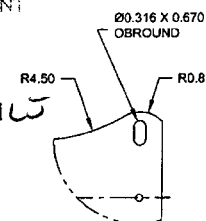
12/04/05



DETAIL A
SCALE 4X C8-1



DETAIL B CB-1
SCALE 4X



DETAIL C
SCALE 4X

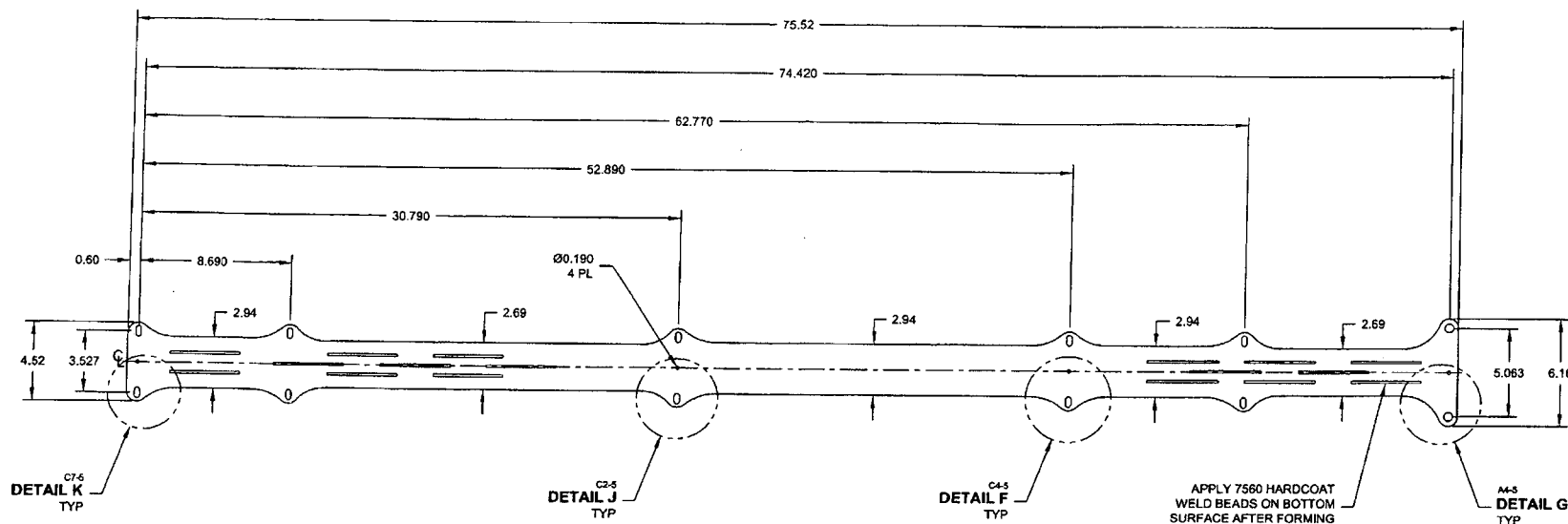
NOTES:

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21,
38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK)
REF. DART SPEC. M1010-S18GA
- 2) FINISH: POWDER COAT GREY SANDTEX (REF.4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY ON INSIDE SURFACE WITH "TCCA-PDA, DART AEROSPACE LTD., P/N D3319-1 B/N BXXXXX,
FOR PRODUCT ELIGIBILITY SEE PDA05-18" PER DART QSI 044 6.1 (FINE POINT PAINT MARKER)
- 7) WEIGHT: 0.90 LBS APPROX
- 8) SYMMETRY: ABOUT CENTERLINE

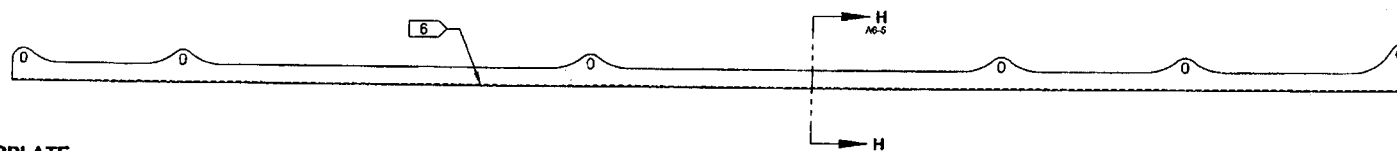
RELEASE
2012-03-16
PER ECN: 12-546 9/12 03

C	UPDATE TO CURRENT STANDARDS IAW QSI 043; CLOSED AFT MOST HOLE ON -3/-5-7 (REF DETAIL G); SEE NCR12-547.	MB	12.03.13
B	WIDEN HOLES, REDUCE WIDTH ON -3/-5-7	PH	05.06.06
A	NEW ISSUE	PH	04.09.24
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV.
MFG. APPR.	<i>[Signature]</i>	D3319	SHEET 1 OF
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	WEARPLATE	NT
DATE	12.03.13	COPYRIGHT © 2004 BY DART AEROSPACE LTD THIS DOCUMENT IS PRINTED AND/OR REPRODUCED, HAS BEEN SUBMITTED TO THE EXTENSION COPYRIGHTED BY IT AND IS NOT TO BE USED FOR ANY PURPOSES OR COPIES OR COMMUNICATIONS TO ANY OTHER PERSONS WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.	

82571



D3319-3F FLAT PATTERN



D3319-3 WEARPLATE

D3319-3 BENDING DETAIL
MAKE FROM D3319-3F

NOTES:

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK) REF. DART SPEC. M1010-S18GA
- 2) FINISH: POWDER COAT GREY SANDEX (REF. 4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY ON INSIDE SURFACE WITH "TCCA-PDA, DART AEROSPACE LTD., P/N D3319-3 B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA05-18" PER DART QSI 044 6.1 (FINE POINT PAINT MARKER)
- 7) WEIGHT: 3.25 lbs APPROX
- 8) SYMMETRY: ABOUT CENTERLINE

RELEASED
2012 JUL 16
912 0716

DESIGN	PH	DART AEROSPACE LTD	
DRAWN	J	HAWKESBURY, ONTARIO, CANADA	
CHECKED	Q	DRAWING NO.	REV. C
MFG. APPR.	S	D3319	SHEET 2 OF 4
APPROVED	#	TITLE	SCALE
DE APPR.	#	WEARPLATE	NTS
DATE	12.03.13	COPYRIGHT © 2004 BY DART AEROSPACE LTD	
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22.63

21.530

9.880

0.60

Ø0.190

2 PL

4.52

3.527

2.940

2.690

5.063

6.16

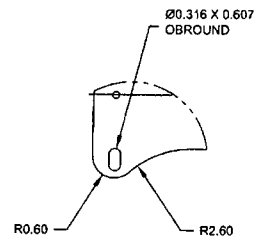
C7-5
DETAIL K
TYP

C2-5
DETAIL J
TYP

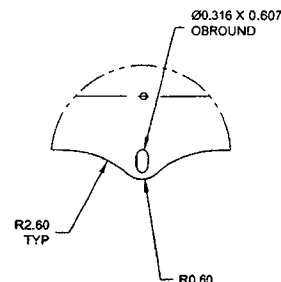
A4-5
DETAIL G
TYP

APPLY 7560 HARDCOAT
WELD BEADS ON BOTTOM
SURFACE AFTER FORMING
SEE SECTION H-H
A6-5

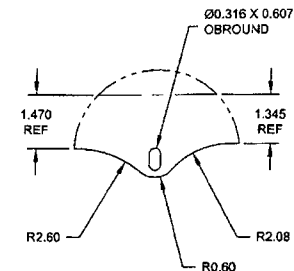
82571



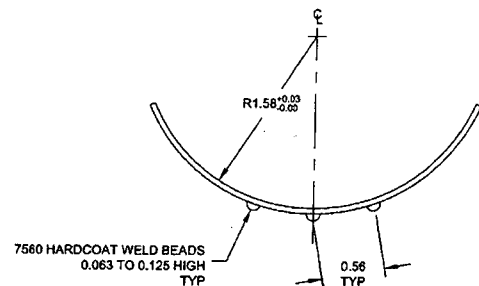
DETAIL K
SCALE 2X
B8-2
C4-3
C8-3



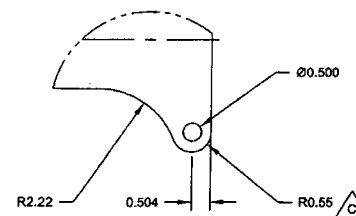
DETAIL F
SCALE 2X
B8-2



DETAIL J
SCALE 2X
B8-2
C7-3



SECTION H-H
SCALE 4X
B4-2
B5-3
B6-3



DETAIL G
SCALE 2X
B8-2
C2-3
C8-3

RELEASED
2012-02-16
09.12.03.16

DESIGN	PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN		DRAWING NO.	REV. C
CHECKED		D3319	SHEET 4 OF 4
MFG. APPR.		TITLE	SCALE
APPROVED		WEARPLATE	NTS
DE APPR.		COPYRIGHT © 2004 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DATE	12.03.13		